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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,146	06/24/2002	Klaus Winter	10191/2063	9486

7590

08/18/2005

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New York, NY 10004

EXAMINER

PIERRE LOUIS, ANDRE

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/980,146

Applicant(s)

WINTER ET AL.

Examiner

Andre Pierre-Louis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-10 have been presented for examination.

Specification/Drawings

1. The drawings are objected to because of following minor informalities: unlabeled rectangular boxes shown in figure 1 of the drawings should be provided with descriptive text and figure 2 is not readable enough. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claim 6 is rejected under 35 U.S.C. 102(a) as being anticipated by Kissel, Jr. (U.S. Patent No.5, 063,857).

2.1 With regards to claim 6, Kissel, Jr. teaches the functional equivalence of a method for lane allocation of consecutive vehicle on a multi-lane roads, and particularly teaches the step of:

carrying out the lane allocation in a model-based manner via a frequency distribution of lateral displacement of detected radar objects (see col.25 lines 25-56).

3. Claims 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Winner (U.S. Patent No. 6,026,353).

3.1. Regarding claim 9, Winner discloses a method for detecting a misalignment of a sensor on the basis of reflection, and particularly teaches the steps of:

- detecting a horizontal misalignment from a position of average values for lanes in a histogram with respect to the a vehicle axis (see abstract).

Although the abstract merely teaches a vertical misalignment, Winner also defines the term "misalignment" to be any misalignment of any part of the sensor (col.1 lines10-13), and that a horizontal misalignment can also be detected (col.2 lines 4-6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kissel, Jr. (U.S. Patent No. 5,063,857), as applied to claim 6 above, in view of Sato et al. (U.S. Patent No. 5,555,555).

4.1. With regards to claim 7, Kissel, Jr. teaches a device with:

- means for carrying out a lane allocation in a model-based manner via a frequency distribution of lateral displacements of detected radar objects (col. 25 lines 25-56); however, he does not teach the means for correlating a determined frequency distribution with one of (a) stored models for frequency distributions of lateral displacements, relating to lane allocation for multi-lane roads having a define width and (b) characteristic lateral displacement histograms for different lanes used by succeeding vehicle. But, Sato et al. teaches a device with means for correlating a determined frequency distribution with one of (a) stored models for frequency distributions of lateral displacements, relating to lane allocation for multi-lane roads having a define width and (b) characteristic lateral displacement histograms for different lanes used by succeeding vehicle (see Sato et al. col.8 line 55 through col.9 line 29). It would have been

obvious to one ordinary skilled of the art at the time of the applicant's invention to modify Kissel, Jr.'s device by adding the means for correlating a determined frequency distribution with the stored models for same to allow user of the device to store and compare data relating to lane allocation. He also teaches the calculation of vehicle's width to provide a weighted mean value, which is then stored in a mean for storing (*see Sato et al. fig. 46 col.29 lines 36-52*).

4.2. As per claim 8, the combined teachings of Kissel, Jr. and Sato et al. teach the means for outputting a model part having a highest correlation to the determined frequency distribution as a lane hypothesis, the lane hypothesis including a number of lanes and a lane used by one's own vehicle (*see Sato et al. fig.3 col.8 lines 32-55*).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (U.S. Patent No. 5,555,555), in view of Winner (U.S. Patent No. 6,026,353).

5.1 With regards to claim 10, Sato et al. teaches a device with:

- means for storing, with equivalent object treatment, a first histogram for a lateral displacement of a detected object (*col.16 line 58 through col.17 line 18*) and a second histogram for a distance of a detected object (*col.18 line 52 through col.19 line 7*); however, he does not teach the means for determining a misalignment angle of a sensor by determining a centroid of the first and second histogram. But, Winner teaches the means for determining a misalignment angle of a sensor by determining a centroid of

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the first and second histogram (see *Winner* figs. 2&3 col.3 lines 16-30).

Thus, it would have obvious for one ordinary skilled of the art at the time of the applicant's invention to modify Sato et al. device by adding the means for determining the misalignment angle of the sensor to properly correct the misalignment. He also teaches the advantage of being able to recognize in which direction the misalignment is (see *Winner* col.2 lines 29-36).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Claims 1-5 have been canceled and claims 6-10 are rejected. This action is non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8am-4: 30pm.

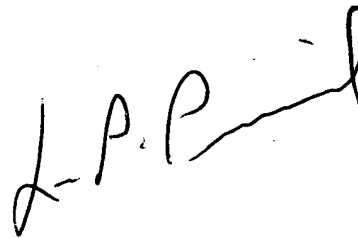
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 1, 2005

APL

A handwritten signature in black ink, appearing to read 'L. Picard', with a long horizontal stroke extending to the right.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100